

A NEW STREPSIPTERAN PARASITIC ON COREIDAE
(STREPSIPTERA: HALICTOPHAGIDAE AND HEMIPTERA: COREIDAE)

R. M. BOHART, *University of California, Davis*

Through the efforts of E. O. Pearson and R. G. Fennah of the Commonwealth Institute of Entomology, London, I have been able to examine specimens of a Strepsipteran attacking the coreid, *Pseudotheraptus wayi* Brown. The bug is reported by Brown (1955) as a pest in Zanzibar, British East Africa, causing an early drop of cocoons. The parasite is a new species of *Halictophagus* which is noteworthy in a number of respects, but especially since it is the first record of stylopization in the Family Coreidae. Other Hemiptera previously known to be parasitized are Membracidae, Cicadellidae, and Cercopidae by *Halictophagus* Curtis; Fulgoroidea by *Elenchus* Curtis; and Pentatomidae, sensu lato, by *Callipharixenos* Pierce, *Coriorenos* Blair, *Triozocera* Pierce and *Dundorenos* L. de Carvalho.

In general appearance the male is a "typical" species of *Halictophagus* but unusually large. The female has a remarkably long cephalothorax, an ovoid brood passage opening, and 4 genital openings instead of the usual 1 to 3.

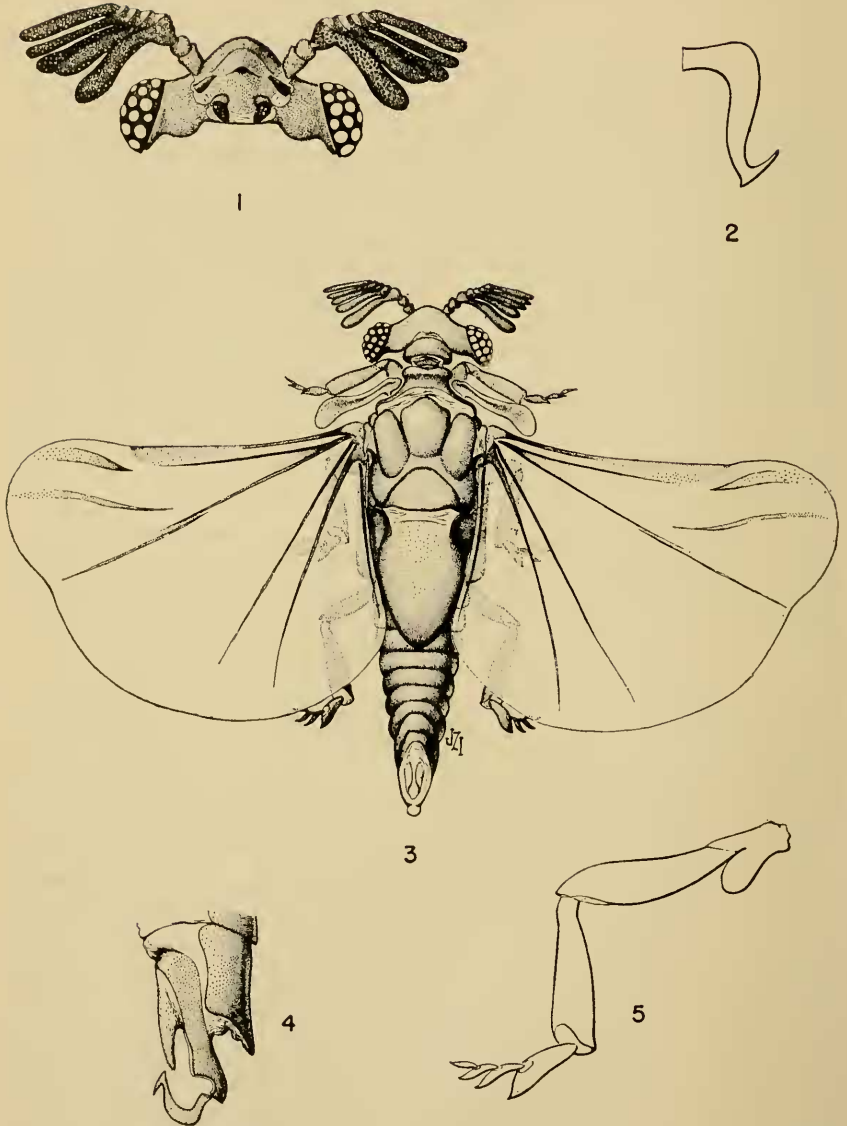
The holotype and paratypes have been returned to the British Museum (Natural History). Other paratype females are in collections of the U. S. National Museum, California Academy of Sciences, and University of California, Davis.

***Halictophagus zanzibarae* Bohart, new species**

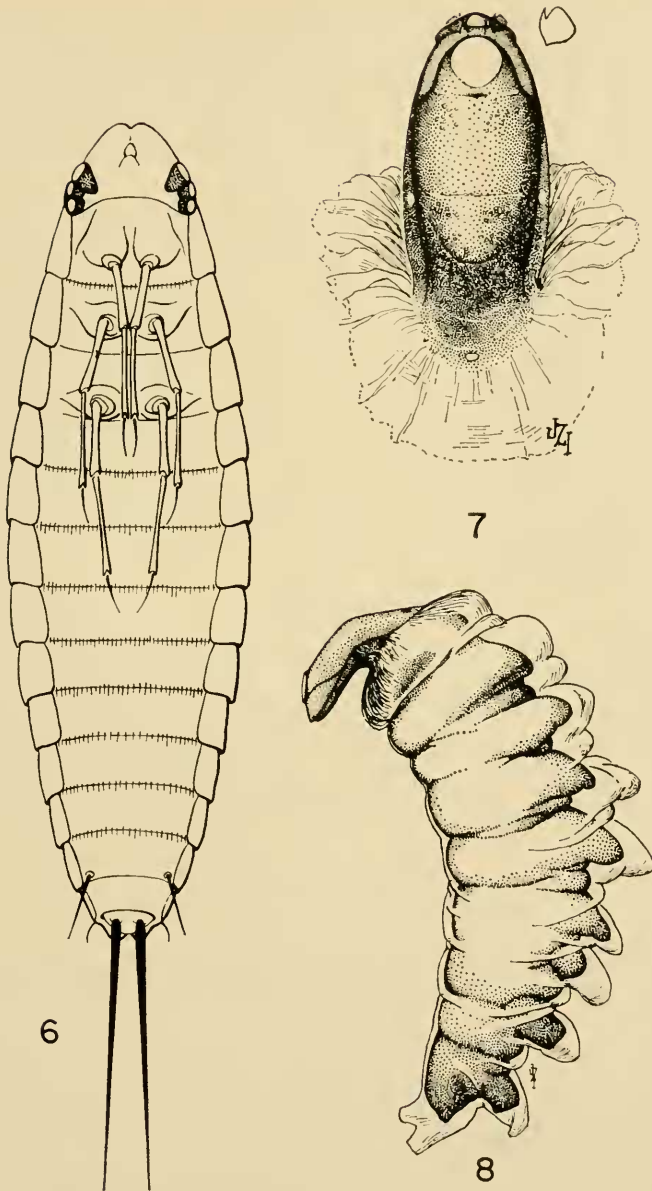
Male.—Antenna compact, segments 3-4 with basal lengths about equal to those of 1-2 respectively, those of 5-6 shorter, first two segments without sensoria, remaining segments completely covered with small sensoria (fig. 1). Mandible tapering to a point, very short as is palpus, terminal segment of palpus with numerous sensoria (fig. 1); compound eye with about 15 facets visible in dorsal aspect. Body structure in dorsal view as shown in fig. 3; fore tibia in side (outer) view nearly one-half as broad as long, longer than fore coxa; fore basitarsus large and nearly circular in outer view, hind leg profile as in fig. 5; mid and hind tibiae not excavated externally. Sternites II-VI with a pair of quadrate spots, partially fused on IV-VI; terminal segments of abdomen and aedeagus in lateral view as in figs. 3 and 4. Length of antenna 0.6 mm., breadth of head 0.7 mm., length of metanotum 1.5 mm., overall length of slide-mounted specimen 2.9 mm.

Female.—Profile, ventral view of cephalothorax as in figs. 7-8. Mandible with a sharp tooth at inner apex opposed by a prominent hump; brood canal opening nearly circular, forming a slightly raised disc in profile; spiracles closer together than to front of head; basal collar cape-like, usually with a median clear area; abdomen with 5 partially sclerotized segments the last 4 of which bear openings into the brood canal. Width of cephalothorax 0.3-0.4 mm., proportions as in figs. 7-8.

First stage larva.—Structure as in fig. 6. Length of body proper 0.12 mm., length of posterior stylets 0.05 mm.



Figs. 1-5, *Haliotophagus zanzibarae*, n. sp., male. Fig. 1, head, ventral; fig. 2, aedeagus, lateral; fig. 3, dorsal view; fig. 4, terminal abdominal segments, lateral; fig. 5, hind leg, lateral.



Figs. 6-8, *Halictophagus zanzibarae*, n. sp. Fig. 6, first stage larva, ventral; fig. 7, female cephalothorax, ventral; fig. 8, female, lateral.
 Illustrations were made by Mrs. Julia Iltis.

Material Examined.—Holotype male, 17 paratype females, and 1 paratype slide of first stage larvae, Zanzibar, Indian Ocean, British East Africa, February, 1959, ex *Pseudotheraptus wayi* Brown, F. L. Vanderplank collector. Also, 2 females in situ on the host, collected on Zanzibar by B. H. Hyde-Wyatt. The 2 females are located, one on either side, above the hind coxa, the cephalothorax exerted from between the bug's thorax and abdomen.

Systematics.—The male of this species differs from others known by the combination of compact antennae, no sensoria on the 2 basal antennal segments but many on the terminal palpal segment, the broad separation of the prescutum and scutellum, and the non-excavated mid and hind tibiae. In my key to the genus *Halictophagus* (Bohart, 1943) it runs to *omani* Bohart except for the palpal sensoria, fewer eye facets, and larger size. There is superficial similarity to *H. javanensis* (Pierce) from Java, and *H. paradeniya* (Pierce) from Ceylon. The mouthparts of *zanzibarae* are much shorter than those of *paradeniya*, the tibiae are not excavated as in *javanensis*, and the scutellum is more broadly rounded than in the other two species, which were figured by Pierce (1918). The female is unique by the great length of the cephalothorax and the nearly circular opening to the brood canal.

REFERENCES

- Bohart, R. M., 1943. New species of *Halictophagus* with a key to the genus in North America. Ann. Ent. Soc. Amer. 36:341-359.
- Brown, E. S., 1955. *Pseudotheraptus wayi*, a new genus and species of coccid injurious to coconuts in East Africa. Bull. Ent. Res. 46:221-240.
- Pierce, W. D., 1918. The comparative morphology of the order Strepsiptera together with records and descriptions of insects. Proc. U. S. Natl. Mus. 54: 391-501.

A NEW XENOTARSONEMUS WITH A NOTE ON *X. VIRIDIS* (EWING) (ACARINA: TARSONEMIDAE)

DONALD DE LEON, *Erwin, Tennessee*

Including the species described below, the genus *Xenotarsonemus* contains four species and nothing certain is known of the feeding habits of any of them.

Xenotarsonemus viridis (Ewing), described from specimens collected on strawberry leaves by F. F. Smith in Maryland, October 1933, had not until recently been recollected. In August 1960, the writer collected two male tarsonemids on *Commelina communis* growing at an elevation of about 2700 feet near Erwin, Tennessee; when it was found that the mites were *X. viridis* an extensive search was